

Notice of Allowability	Application No.	Applicant(s)	
	09/684,124	DIXON, DUANE	
	Examiner	Art Unit	
	Thanh Y. Tran	2827	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 6/2/04.
2. ☒ The allowed claim(s) is/are 1-21.
3. ☒ The drawings filed on 06 October 2000 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. <input type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____ |
|---|--|

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Daniel Miller on 7/22/2004.

The application has been amended as follows:

Claim 30 has been canceled.

Allowable Subject Matter

2. Claims 1-21 are allowed.
3. The following is a statement of reasons for the indication of allowable subject matter: claims 1 and 11 recite, inter alia, "teach the method for mounting a lead frame to a circuit board comprising: the first reflow soldering of the lead frame and a first set of electrical components on a first surface of the circuit board; inverting the circuit board; and then reflow soldering a second set of components to a second surface of the inverted circuit board, wherein the lead frame stays connected to the first surface of circuit board during the second reflow soldering"; in the combination with other claimed features.
4. The art of record does not disclose the above limitations, nor would it be obvious to modify the art of record so as to include the above limitations.

Pao (U.S. 5,386,343) teaches in figure 1 an apparatus and a corresponding method for mounting a lead frame to a circuit board having a first and second side, the method comprising: first reflow soldering of the lead frame (see solder joint 32 in figure 1) and a first set of electrical components (20) on the first side of the circuit board (10). However, Pao does not teach the method comprising the step of: inverting the circuit board; and second reflow soldering of a second set of electrical components on the second surface of the circuit board.

Cnyrim et al (U.S. 4,959,750) teaches in figure 1 a circuit board (1) comprising reflow soldering (see solder joints 11) of a second set of electrical components (2, 3, 4, 8, 9 and 10) on the second surface of the circuit board (1). Cnyrim et al does not teach the step of: mounting a lead frame to a circuit board; the first reflow soldering of the lead frame and a first set of electrical components on the first side of the circuit board. Thus the combined teaching of the references of Pao and Cnyrim et al did not teach the method for mounting a lead frame to a circuit board comprising: the first reflow soldering of the lead frame and a first set of electrical components on a first surface of the circuit board; inverting the circuit board; and then reflow soldering a second set of components to a second surface of the inverted circuit board, *wherein the lead frame stays connected to the first surface of circuit board during the second reflow soldering*

5. The above references do not teach the above-mentioned limitations in paragraph 3.
6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Contact Information


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh Y. Tran whose telephone number is (571) 272-2110. The examiner can normally be reached on Monday through Thursday and on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo, can be reached on (571) 272-1957. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3431.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

TYT

8/4/04


DAVID ZARNEKE
PRIMARY EXAMINER
- 8/15/04